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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,396	01/31/2001	David J. Lyon	M-9897 US	3069
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BAKER BOTTS, LLP 910 LOUISIANA HOUSTON, TX 77002-4995			EXAMINER MEINCKE DIAZ, SUSANNA M	
			ART UNIT 3692	PAPER NUMBER
			NOTIFICATION DATE 12/26/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

debbie.allen@bakerbotts.com

Office Action Summary

Application No.

09/774,396

Applicant(s)

LYON ET AL.

Examiner

Susanna M. Diaz

Art Unit

3692

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 71-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/08.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2008 has been entered.

Claims 1-70 are cancelled.

Claims 71-73 have been added and are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 71-73 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly et al. (U.S. Patent No. 5,787,000) in view of Johnson et al. (U.S. Patent No. 5,712,989)

and further in view of Manugistics⁵, as disclosed in "Manugistics Introduces Industry's Only Extended Supply Chain Management Solution," in view of Official Notice in view of Layden ("A Rapidly Changing Landscape").

[Claim 71] Lilly discloses a method for scheduling production of at least one item on at least one manufacturing line (312) based upon customer orders and availability of materials used for the manufacture of the at least one item, said method comprising the steps of:

(a) receiving at least one customer order for at least one item, the step of receiving the at least one customer order being performed by a work-in-progress (WIP) tracking and control module (320) executing on a computer system (col. 5, line 24 through col. 9, line 25 – "WIP tracking and control" is a mere label of the module and does not imply any functionality beyond that which is explicitly recited in the claim);

(b) storing the at least one customer order for the at least one item as WIP data in a WIP data memory (322) of the computer system (col. 4, lines 45-57; col. 9, lines 45-50 – "WIP data" is a mere label of the memory and does not imply any functionality beyond that which is explicitly recited in the claim);

(c) developing a list of materials and working schedules required to manufacture the at least one item, the steps of developing a list of materials and working schedules being performed by a scheduling module (330) from information (col. 5, line 24 through col. 9, line 25) comprising:

(1) the WIP data stored in the WIP data memory (322) (col. 4, lines 45-57; col. 5, line 24 through col. 9, line 25 -- "WIP data" is a mere label of the memory and does not imply any functionality beyond that which is explicitly recited in the claim),

(3) available in-house inventory from an inventory manager module (360) coupled to an in-house inventory memory (362) (col. 8, lines 33-67),

(5) scheduling data from a scheduling data memory (332), all memories and modules executing on the computer system (col. 4, lines 45-57; col. 5, line 24 through col. 9, line 25);

(d) generating a work schedule for manufacturing the at least one item on the at least one manufacturing line (312), the step of generating the work schedule being performed by the work-in-progress (WIP) tracking and control module (320) executing on the computer system (col. 4, lines 45-57; col. 5, line 24 through col. 9, line 25 -- "WIP tracking and control" is a mere label of the module and does not imply any functionality beyond that which is explicitly recited in the claim).

Since Lilly teaches that a material availability is assessed by determining when a supply will be received into inventory (col. 8, lines 33-67), this implies that the needed materials may be ordered from an external inventory, including a supplier inventory; however, Lilly does not explicitly disclose that the (2) available external inventory [is obtained] from an external communications module (340) coupled to an external visibility interface module (350) coupled to an external inventory memory (352). Johnson discloses that available external inventory data may be obtained through a

host database that is linked to the local inventory system (abstract; col. 14, lines 48-56; col. 16, lines 29-50; col. 22, lines 54-62). This facilitates more efficient scheduling by allowing a manufacturer to have access to more accurate inventory availability information. Since Lilly's manufacturing schedule is dependent on the ability to receive materials when needed for the proper stages of manufacturing, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Lilly such that the (2) available external inventory [is obtained] from an external communications module (340) coupled to an external visibility interface module (350) coupled to an external inventory memory (352) in order to facilitate more efficient scheduling by allowing a manufacturer to have access to more accurate inventory availability information.

The Lilly-Johnson combination does not expressly teach that materials delivered from available inventory are selected from an in-transit inventory. In other words, neither Lilly nor Johnson discloses (4) in-transit inventory from an in-transit inventory memory (372) coupled to a delivery scheduling module (370). However, "Manugistics Introduces Industry's Only Extended Supply Chain Management Solution" discloses some of the functionality of Manugistics5, which is a Web-enabled supply chain planning and decision-making tool. "By providing real-time visibility into information, including consumer demand, in-transit inventories, manufacturing schedules and plans, and shipment status across their supply chains, as well as their channel partners' supply chains, Manugistics5 will allow companies to make improved supply chain decisions." (Manugistics5: ¶ 1) Users of Manugistics5 "can 'point-and-click' their way

from a high-level enterprise view to a shop floor schedule and obtain updated information about the entire supply chain channel, from suppliers, plants and distribution centers, to retail activity...With the Supply Chain Navigator, planners can determine the most profitable supply chain strategy for sourcing, production, inventory, and vendor/carrier commitments, based on the real-world and real-time constraints of the supply chain." (Manugistics5: ¶ 5) Manugistics5's floor schedule is integrated with inventory data in order to facilitate decision-making (Manugistics5: ¶¶ 5, 9) while inventory management capabilities include the ability to monitor in-transit inventory (Manugistics5: ¶ 7). Since the Lilly-Johnson combination is applied to an order-driven manufacturing environment (in which perfect timing of the arrival of needed materials is crucial to guarantee delivery of a finished work product when promised/needed) and Manugistics5 facilitates real-time decision-making in a supply chain, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Lilly-Johnson combination to schedule the delivery of materials based on available inventory, including in-transit inventory (including (4) in-transit inventory from an in-transit inventory memory (372) coupled to a delivery scheduling module (370)) and perform the step of (f) generating in-house and external material requests, the steps of generating the in-house and external material requests being performed by the delivery scheduling module (370) executing on the computer system, in order to facilitate the prevention of and/or quick resolution of conflicts with respect to product availability by allowing users "to make the best scheduling decisions possible" (as suggested by "Manugistics Introduces Industry's Only Extended Supply

Chain Management Solution," see ¶ 6), thereby improving the overall efficiency of the supply chain.

Lilly discloses scheduling a work order based on when all materials are expected to be available (Figs. 7, 10; col. 4, lines 39-46; col. 7, lines 1-7); however, Lilly does not explicitly disclose (e) receiving truck arrival information from the at least one manufacturing line (312) and generating a truck arrival schedule to the delivery schedule module (370), the steps of receiving the truck arrival information and generating the truck arrival schedule being performed by a scheduling module (375) executing on the computer system. "Manugistics Introduces Industry's Only Extended Supply Chain Management Solution" discloses some of the functionality of Manugistics5, which is a Web-enabled supply chain planning and decision-making tool. "By providing real-time visibility into information, including consumer demand, in-transit inventories, manufacturing schedules and plans, and shipment status across their supply chains, as well as their channel partners' supply chains, Manugistics5 will allow companies to make improved supply chain decisions." (Manugistics5: ¶ 1) Users of Manugistics5 "can 'point-and-click' their way from a high-level enterprise view to a shop floor schedule and obtain updated information about the entire supply chain channel, from suppliers, plants and distribution centers, to retail activity...With the Supply Chain Navigator, planners can determine the most profitable supply chain strategy for sourcing, production, inventory, and vendor/carrier commitments, based on the real-world and real-time constraints of the supply chain." (Manugistics5: ¶ 5) Manugistics5's floor schedule is integrated with inventory data in order to facilitate decision-making

(Manugistics5: ¶¶ 5, 9) while inventory management capabilities include the ability to monitor in-transit inventory (Manugistics5: ¶ 7). Furthermore, Official Notice is taken that it was old and well-known in the art of shipping to use a truck to deliver goods. Trucks are efficient modes of transportation for ground shipment to multiple locations in an area that is more easily accessible by roads (as opposed to by sea or air). Since the Lilly-Johnson combination is applied to an order-driven manufacturing environment (in which perfect timing of the arrival of needed materials is crucial to guarantee delivery of a finished work product when promised/needed) and Manugistics5 facilitates real-time decision-making in a supply chain, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Lilly-Johnson combination to (e) receive truck arrival information from the at least one manufacturing line (312) and generate a truck arrival schedule to the delivery schedule module (370), the steps of receiving the truck arrival information and generating the truck arrival schedule being performed by a scheduling module (375) executing on the computer system in order to facilitate the prevention of and/or quick resolution of conflicts with respect to product availability by allowing users "to make the best scheduling decisions possible" (as suggested by "Manugistics Introduces Industry's Only Extended Supply Chain Management Solution," see ¶ 6), thereby improving the overall efficiency of the supply chain. In other words, by knowing when a truck will arrive with needed materials, manufacturing schedules may be more efficiently scheduled since scheduling may be performed using more accurate availability data.

Lilly does not expressly disclose repeating steps (a)-(f) until the at least one item has been manufactured. However, Layden discusses order-driven manufacturing scheduling techniques (§ 3) in which dynamic plant management is employed (§ 5), thereby allowing dynamic factories to be “run without a plan at the floor level; orders are launched as soon as they arrive.” (§ 5) Layden’s disclosed scheduling techniques are based upon well-known scheduling theories, including “backward pass” and “forward pass” (§ 26), both of which are utilized by Lilly. Layden’s scheduling techniques allow one to instantly communicate orders to the shop floor, scheduling them as they arrive (§§ 5, 9). Layden states, “Integration of scheduling and material planning balances plantwide priorities against the need for optimal workstation sequencing. The order-of-work is not generated until the operation start time.” (§ 11) Material and resource constraints are taken into account in order to perform rapid resynchronization of customer orders (§ 13). This allows for the immediate release of new orders to the floor in real time upon acceptance and the implementation of last-minute customer order changes as well as the insertion of priority orders (§ 14). Layden’s rapid order flow performs the steps of “reserving resources and material, triggering reorders, and continuously adjusting for status changes” (§ 11). Clearly, Layden bases its principles on the common scheduling techniques utilized by Lilly (e.g., using forward and backward scheduling algorithms to incorporate material and resource availability and generate a production schedule) and enhances them by providing the work schedule to the manufacturing line, substantially immediately after generating the work schedule, for initiating work to mass produce each item according to the work schedule and repeating

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all recited steps a plurality of times during a manufacturing shift, thereby making the order-driven manufacturing process more efficiently and effectively responsive to new customer orders, priority orders, last-minute customer changes, etc. Consequently, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to repeat steps (a)-(f) until the at least one item has been manufactured (as generally taught by Layden) with the details of Lilly's modified production planning and scheduling system in order to reap these benefits (i.e., making the order-driven manufacturing process more efficiently and effectively responsive to new customer orders, priority orders, last-minute customer changes, etc.).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 72 and 73 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 7,346,530. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 72 and 73 introduce the subject matter deemed to be allowable in U.S. Patent No. 7,346,530. Claims 72 and 73 are dependent from claim 71. Claim 71 is deemed to recite an obvious combination of features for the reasons presented above in the rejection over Lilly et al. (U.S. Patent No. 5,787,000) in view of Johnson et al. (U.S. Patent No. 5,712,989) and further in view of Manugistics5, as disclosed in "Manugistics Introduces Industry's Only Extended Supply Chain Management Solution," in view of Official Notice in view of Layden ("A Rapidly Changing Landscape").

Allowable Subject Matter

7. Claims 72 and 73 would be allowable if rewritten to overcome the Double Patenting rejection, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claims 72 and 73 are indicated as allowable for the reasons presented in U.S. Patent No. 7,346,530.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susanna M. Diaz/
Primary Examiner, Art Unit 3692